

Docket No. AUS9-2000-0496-US1

CLAIMS:

What is claimed is:

- Sub A2*
1. A method comprising:
 - creating a message having a recipient at an address on a server, wherein the message identifies at least one delivery attribute;
 - sending the electronic message to the recipient;
 - receiving a response including validity information indicating whether the address is valid and at least one delivery attribute value corresponding to the at least one delivery attribute.
 2. The method of claim 1, wherein the at least one delivery attribute comprises at least one of a recipient mail system identifier, a recipient mail server identifier, a recipient router identifier, a sender mail system identifier, a sender mail server identifier, and a sender router identifier.
 3. The method of claim 1, wherein the validity information indicates that the address is invalid, the method further comprising:
 - processing the at least one delivery attribute value to form failure analysis information; and
 - presenting the failure analysis information.
 4. The method of claim 1, wherein the at least one delivery attribute value including an address, the address being one of a recipient mail system address, a recipient mail server address, a recipient router address, a sender mail system address, a sender mail server address, and a sender router address.

5. The method of claim 4, wherein the step of processing the at least one delivery attribute value comprises pinging the address.

6. The method of claim 4, wherein the step of processing the at least one delivery attribute value comprises performing a simple network monitoring query for the address.

7. The method of claim 1, further comprising:
storing the delivery attribute value in a storage.

8. The method of claim 7, wherein the storage is a database.

9. The method of claim 1, wherein the method is performed by a client.

10. The method of claim 1, wherein the method is performed by a server.

11. A method comprising:
receiving an electronic message having a recipient at an address on a server;
identifying at least one deliver attribute in the electronic message;
generating a response including validity information indicating whether the address is valid and at least one delivery attribute value corresponding to the at least one delivery attribute.

12. The method of claim 11, wherein the at least one

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delivery attribute comprises at least one of a recipient mail system identifier, a recipient mail server identifier, a recipient router identifier, a sender mail system identifier, a sender mail server identifier, and a sender router identifier.

13. The method of claim 11, wherein the step of generating a response comprises discovering the at least one delivery attribute value.

14. The method of claim 11 wherein the method is performed by a server.

15. An apparatus comprising:

creation means for creating a message having a recipient at an address on a server, wherein the message identifies at least one delivery attribute;

sending means for sending the electronic message to the recipient;

receipt means for receiving a response including validity information indicating whether the address is valid and at least one delivery attribute value corresponding to the at least one delivery attribute.

16. The apparatus of claim 15, wherein the at least one delivery attribute comprises at least one of a recipient mail system identifier, a recipient mail server identifier, a recipient router identifier, a sender mail system identifier, a sender mail server identifier, and a sender router identifier.

17. The apparatus of claim 15, wherein the validity information indicates that the address is invalid, the

apparatus further comprising:

processing means for processing the at least one delivery attribute value to form failure analysis information; and

presentation means for presenting the failure analysis information.

18. The apparatus of claim 15, wherein the at least one delivery attribute value including an address, the address being one of a recipient mail system address, a recipient mail server address, a recipient router address, a sender mail system address, a sender mail server address, and a sender router address.

19. The apparatus of claim 18, wherein the processing means comprises means for pinging the address.

20. The apparatus of claim 18, wherein the processing means comprises means for performing a simple network monitoring query for the address.

21. The apparatus of claim 15, further comprising:
storage means for storing the delivery attribute value.

22. The apparatus of claim 21, wherein the storage means comprises a database.

23. The apparatus of claim 15, wherein the apparatus is embodied in a client computer.

24. The apparatus of claim 15, wherein the apparatus is embodied in a server computer.

25. An apparatus comprising:

receipt means for receiving an electronic message having a recipient at an address on a server;

identification means for identifying at least one deliver attribute in the electronic message;

generation means for generating a response including validity information indicating whether the address is valid and at least one delivery attribute value corresponding to the at least one delivery attribute.

26. The apparatus of claim 25, wherein the at least one delivery attribute comprises at least one of a recipient mail system identifier, a recipient mail server identifier, a recipient router identifier, a sender mail system identifier, a sender mail server identifier, and a sender router identifier.

27. The apparatus of claim 25, wherein the generation means comprises means for discovering the at least one delivery attribute value.

28. The apparatus of claim 25, wherein the apparatus is embodied in a server computer.

29. A computer program product, in a computer readable medium, comprising:

instructions for creating a message having a recipient at an address on a server, wherein the message identifies at least one delivery attribute;

instructions for sending the electronic message to the recipient;

instructions for receiving a response including

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validity information indicating whether the address is valid and at least one delivery attribute value corresponding to the at least one delivery attribute.

30. A computer program product, in a computer readable medium, comprising:

instructions for receiving an electronic message having a recipient at an address on a server;

instructions for identifying at least one delivery attribute in the electronic message;

instructions for generating a response including validity information indicating whether the address is valid and at least one delivery attribute value corresponding to the at least one delivery attribute.

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